California Regional Water Quality Control Board
San Diego Region

Winston H. Hickox
Secretary for Environmental Protection

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Gray Davis
Governor

November 14, 2003

Mr. Harold Bailey
Director of Operations and Water Quality
Padre Dam Municipal Water District
10887 Woodside Avenue
Santee, CA 92072-9003

In Reply Refer To:
POTW: 01-0053.01: hansd

Dear Mr. Bailey:

ADOPTION OF ORDER NO. R9-2003-0179, NPDES PERMIT NO. CA0107492 FOR THE PADRE DAM MUNICIPAL WATER DISTRICT, PADRE DAM WATER RECYCLING FACILITY DISCHARGE TO SYCAMORE CREEK AND THE SAN DIEGO RIVER, SAN DIEGO COUNTY

Enclosed are copies of the subject Order and NPDES Permit, Fact Sheet, and Monitoring and Reporting Program (MRP) adopted by the California Regional Water Quality Control Board, San Diego Region (Regional Board) at their November 12, 2003 meeting. As specified in Attachment 3 to the Order, the requirements contained therein became effective 10 days after the date of adoption by the Regional Board. MRP No. R9-2003-0179 shall be implemented on January 1, 2004.

Copies of the enclosed documents can also be obtained from our website as follows:

http://www.swrcb.ca.gov/rwqcb9/orders/orders.html

If you have any questions, please contact Mr. David Hanson at (858) 467-2724 or via email at hansd@rb9.swrcb.ca.gov.

Respectfully,

JOHN H. ROBERTUS
Executive Officer

enclosures
cc: see attached distribution list

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September 26, 2003

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

FACT SHEET
ORDER NO. R9-2003-0179
NPDES PERMIT NO. CA0107492
WASTE DISCHARGE REQUIREMENTS
FOR THE
PADRE DAM MUNICIPAL WATER DISTRICT
PADRE DAM WATER RECYCLING FACILITY
DISCHARGE TO
SYCAMORE CREEK AND THE SAN DIEGO RIVER
SAN DIEGO COUNTY

1. AGENCY / FACILITY INFORMATION

Agency name:	Padre Dam Municipal Water District
Agency Mailing Address:	P.O. Box 719003 Santee, California 92072-9003
Facility Name and Location:	Padre Dam Water Recycling Facility 12001 N. Fanita Parkway Santee, California 92072
Contact Person:	Mr. Harold E. Bailey Director of Operations and Water Quality
Telephone:	(619) 448-3111

2. BACKGROUND

A. On June 10, 1998, this Regional Board adopted Order No. 98-60, NPDES Permit No. CA0107492, *Waste Discharge Requirements for Padre Dam Municipal Water District (PDMWD) Padre Dam Water Recycling Facility (PDWRF) Discharge to Sycamore Creek and the San Diego River, San Diego County*. Order No. 98-60 established requirements for the discharge of up to 2.0 million gallons per day (MGD) of tertiary treated municipal wastewater from the PDWRF through the Santee Lakes, to Sycamore Creek, tributary to the San Diego River. Order No. 98-60 contains an expiration date of June 21, 2003.

B. Pursuant to Reporting Requirement E.14 of Order No. 98-60, PDMWD was required to submit their report of waste discharge 180 days prior to the June 21, 2003 expiration date. On December 20, 2002, the PDMWD submitted a complete National Pollutant Discharge Elimination System (NPDES) permit application for the renewal of Order No.

98-60. Since the discharger has submitted a complete application for renewal of the NPDES permit, Order No. 98-60 is administratively extended until the adoption of tentative Order No. R9-2003-0179 pursuant to Title 40 of the Code of Federal Regulations (CFR), Part 122.41(b) [40 CFR 122.41(b)].

C. Order No. R9-2003-0179 shall serve as an NPDES permit for the discharge of treated wastewater from the PDWRF to the San Diego River and/or its tributaries pursuant to Section 402 of the Clean Water Act and amendments thereto.

D. On December 10, 1997, this Regional Board adopted Order No. 97-49, *Waste Discharge and Water Recycling Requirements for the Production and purveyance of Recycled Water for Padre Dam Municipal Water District*. Order No. 97-49 establishes requirements for the discharge to land of up to 2.0 MGD of recycled water from the PDWRF within the Santee and El Cajon hydrologic subareas (HSA).

3. FACILITY DESCRIPTION

A. The PDWRF has a design capacity of 2.0 MGD. PDMWD collects wastewater from City of Santee, a portion of the City of El Cajon, and portions of the unincorporated communities of Alpine, Blossom Valley, Crest, Dehesa, El Cajon, Flinn Springs, Harbison Canyon, and Lakeside. Total wastewater collection within the PDMWD sewered area for year 2002 (through October 2002) averaged 4.98 MGD. Of this total, 3.27 MGD was directed to the City of San Diego Metropolitan (Metro) wastewater collection system and 1.71 MGD was directed to the PDWRF.

B. The PDWRF has primary, secondary, and tertiary treatment processes. Primary clarifiers remove settleable solids and floating material, which are directed back into the Metro system. Secondary treatment is provided through the Bardenpho process that involves a series of aeration and anoxic stages to achieve biological removal of nitrogen and phosphorous. After biological treatment, flow is directed to secondary clarifiers where settleable solids and floating material is removed. The waste sludge is directed to the Metro system. The tertiary process is designed to comply with the State of California Department of Health Services (DHS) regulations for "disinfected, filtered wastewater" for unrestricted use. Tertiary treatment is provided through alum and polymer addition, flocculation and sedimentation, denitrifying filtration, chlorination, and dechlorination.

C. Most of the water treated at the PDWRF is recycled and sent to reuse sites in the Santee and El Cajon HSAs. The water not sent to reuse sites is discharged to the Santee Lakes, a series of seven man-made lakes. PDMWD owns and operates the Santee Lakes as a recreational facility. These artificial lakes are not waters of the United States. Effluent first enters Lake No. 7 and flows by gravity through each lake until eventually reaching Lake No. 1, which flows into Sycamore Creek, a tributary of the San Diego River. As the Santee Lakes are kept at a constant level, flow to the creek is regulated by the amount released from the treatment plant into the lake system.

D. Flow statistics for 2002: The PDWRF received an average influent flow of 1.7 MGD. The average amount recycled and sent to reuse sites was 0.9 MGD. The average discharge to Lake No. 7 was 0.8 MGD and the average discharge from Lake No. 1 to Sycamore Creek was 0.7 MGD. Monthly average flow rates from Lake No. 1 to Sycamore Creek ranged from 1.5 MGD in the winter to no discharge during the summer.

E. The discharge from the PDWRF to Sycamore Creek and the San Diego River has a threat to water quality/complexity rating of category 1A.

4. DESCRIPTION OF DISCHARGE

The discharge point from Lake No. 1 into Sycamore Creek is located immediately adjacent to Lake No. 1 approximately 1000 feet north of Carlton Oaks Drive (lat. 32° 50' 45", lon. 117° 00' 15") in the City of Santee. Sycamore Creek flows through decorative ponds within the Carlton Oaks Country Club golf course for approximately one mile before entering the San Diego River.

5. RECEIVING WATER

A. The Lower San Diego River is a 20-mile urban waterway in the San Diego River Watershed of the San Diego Region with year-round flow. The San Diego River originates in the East County, passing through Lakeside and Santee, and then runs parallel to Interstate 8 all the way to the Pacific Ocean coastline where it discharges near Ocean Beach. The lower portion of the river begins just north of Lake Jennings, near the town of Lakeside.

B. The Water Quality Control Plan for the San Diego Basin (9), (Basin Plan) was adopted by this Regional Board on September 8, 1994 and subsequently approved by the State Water Resources Control Board (SWRCB). Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board. The Basin Plan identifies the beneficial uses of all surface and ground waters of the region and establishes numerical and narrative water quality objectives, and implementation plans, for the protection of identified beneficial uses.

C. The Basin Plan identifies the following beneficial uses of surface waters of the Mission San Diego and Santee Hydrologic Subareas (HSA 7.11 and HSA 7.12), which includes Sycamore Creek and the San Diego River:

a. agricultural supply (AGR)
b. industrial service supply (IND)
c. contact and non-contact water recreation (REC1 and REC2)
d. warm freshwater habitat (WARM)
e. cold freshwater habitat (COLD)

f. wildlife habitat (WILD)
g. preservation of rare, threatened or endangered species (RARE)

D. The Basin Plan identifies the following beneficial uses of ground waters of the Mission San Diego and Santee Hydrologic Subareas (HSA 7.11 and HSA 7.12):

a. municipal and domestic supply (MUN)
b. industrial service and process supply (IND and PROC)
c. agricultural supply (AGR)

E. No Areas of Special Biological Significance (ASBS) have been designated downstream of the discharge location.

F. Receiving water monitoring data indicates that the total nitrogen concentrations in the upstream and downstream San Diego River waters are greater than the Basin Plan numerical objective of 1.0 mg/l. Likewise, downstream total phosphorous concentrations are greater than the Basin Plan objective of 0.1 mg/l. Receiving water monitoring data also suggests, however, that the subject discharge is not the primary contributor of nutrient loads in the receiving waters (see Section 6 for more information regarding nutrients).

G. Preliminary benthic macroinvertebrate analyses performed in the lower San Diego River receiving waters (downstream of the discharge) in 1998, 1999, and 2000 indicate a "fair to poor" index of biotic integrity (IBI), which is a multimetric analytical approach recommended by the United States Environmental Protection Agency (USEPA) for assessing the overall "ecological health" of an aquatic community. However, there is no correlation established between the elevated nutrient loading and the "fair to poor" rating.

H. The SWRCB adopted the 2002 Clean Water Act section 303(d) list of water quality limited segments at its February 4, 2003 Board Meeting. The list was approved by the USEPA on July 25, 2003. The Lower San Diego River (HSA 7.11 and HSA 7.12) is listed as an impaired water body due to elevated fecal coliform, low dissolved oxygen, elevated phosphorus, and elevated total dissolved solids. If/when Waste Load Allocations (WLAs) are calculated in accordance with Total Maximum Daily Load (TMDL) procedures, limits contained in this or subsequent Orders will be modified accordingly.

6. BASIS OF EFFLUENT LIMIT DETERMINATIONS

A. Total Suspended Solids, Biochemical Oxygen Demand, and pH

40 CFR 133.102 establishes minimum secondary treatment requirements for total suspended solids (TSS), biochemical oxygen demand (BOD), and pH. The TSS, BOD, and pH limits contained in Order No. R9-2003-0179 are more stringent than the federal secondary treatment requirements. The effluent concentration and mass emission rate

(MER) limits established for BOD and TSS are based in part on treatment performance data for the PDWRF and were determined using best professional judgment (BPJ) pursuant to 40 CFR 125.3. The basis for the effluent limit for pH is the Basin Plan objective, which requires the pH to be between 6.5 and 8.5 at all times. The limits are the same as contained in Order No. 98-60.

B. Nutrients

The Basin Plan establishes the following Biostimulatory Substances Objectives for nitrogen and phosphorus, which are applicable to surface waters in the Mission SD and Santee HSAs:

> *Inland surface waters, bays, and estuaries and coastal lagoon waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses.*
>
> *Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total Phosphorus (P) concentrations shall not exceed 0.05 mg/l in any stream at the point where it enters any standing body of water, nor 0.025 mg/l in any standing body of water. A desired goal in order to prevent plant nuisance in streams and other flowing waters appears to be 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1, on a weight to weight basis shall be used.*
>
> *Note – Certain exceptions to the above water quality objectives are described in Chapter 4 in the sections titled Discharges to Coastal Lagoons from Pilot Water Reclamation Projects and Discharges to Inland Surface Waters.*

Nutrient enrichment can cause reduction in dissolved oxygen. The Basin Plan establishes the following applicable objectives for dissolved oxygen:

> *Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in water with designated COLD beneficial uses. The annual mean dissolved oxygen concentration shall not be less than 7 mg/l more than 10% of the time.*

PDMWD has collected and continues to collect data for nitrogen, phosphorous, and dissolved oxygen at six monitoring sites along the San Diego River. The 2002 303(d)

listing of the Lower San Diego River as impaired for phosphorous and low dissolved oxygen was based largely on these data. Table 1 summarizes the nitrogen, phosphorous, and dissolved oxygen data submitted by PDMWD for the period 1998 to 2002.

Table 1. Nitrogen, Phosphorous, and Dissolved Oxygen Monitoring Data, 1998 - 2002

Location	Total Nitrogen (mg/l)		Total Phosphorous (mg/l)		Dissolved Oxygen (mg/l)	
	Mean	Median	Mean	Median	Mean	Median
SD River at Carlton Hills	1.0	0.9	0.08	0.07	5.0	4.7
Forester Creek	5.0	4.1	0.10	0.08	6.9	7.2
Combined Upstream SD River[1]	2.7	2.5	0.09	0.10	NC[2]	NC[2]
Discharge from Lake No. 1	1.8	1.7	0.15	0.12	7.7[3]	NC[2]
SD River at Mast Boulevard	1.6	1.3	0.17	0.15	5.4	5.0
SD River at Old Mission Dam	1.2	1.0	0.21	0.20	5.3	5.3
SD River at Mission Ponds	1.1	1.0	0.22	0.21	3.9	3.1
SD River at Fashion Valley Rd	1.3	1.1	.22	.20	4.5	4.0

1 Computed combination of flows from San Diego River at Carlton Hills and Forester Creek at San Diego River Confluence
2 NC = not calculated
3 Data from 2000 - 2002

When compared to the average upstream flow and concentration in the San Diego River, the discharge from Lake No. 1 contributes an average of approximately 11% of the total nitrogen and 14% of the total phosphorous at the point of discharge. However, as additional flow and nutrient load is added downstream, the percentage of overall nutrient loading attributable to the discharge decreases.

Chapter 4 of the Basin establishes the following methods for compliance with the nitrogen and phosphorus water quality objectives:

> *The Regional Board may use the goal for phosphorus concentration in flowing water contained in the Biostimulatory Substances Objective as guidance in establishing appropriate effluent limitations; or*
>
> *Alternatively, the Regional Board may determine compliance with the narrative objective based on the following four factors:*
>
> - ✓ *measurement of ambient concentrations of nitrogen and phosphorus;*
> - ✓ *the dissolved oxygen requirements of downstream beneficial uses;*
> - ✓ *use of best available technology (BAT) economically feasible for the removal of nutrients: and*
> - ✓ *the development and implementation of a watercourse monitoring and management plan.*

Order No. 98-60 established effluent limitations for nitrogen and phosphorus based on best professional judgement and specified that compliance with the narrative objectives of the Basin Plan be determined based on the four factors listed above. Order No. R9-2003-0179 contains more restrictive effluent nitrogen and phosphorus mass emission rate limitations based on the Basin Plan numerical objectives of 0.1 mg/l for phosphorous and 1.0 mg/l for nitrogen and a flowrate of 2 MGD. The decision to issue more restrictive nitrogen and phosphorous limits is based on the 303(d) listing of the Lower San Diego River as an impaired water body due to low dissolved oxygen and elevated phosphorus, ongoing detection of nitrogen and phosphorous concentrations in excess of the Basin Plan numerical water quality objectives, and benthic macroinvertebrate analyses indicating a "fair to poor" IBI in the San Diego River.

C. Priority Pollutants

Federal priority pollutant criteria have been promulgated by the USEPA in the 1992 National Toxics Rule (NTR) 40 CFR 131.36 (amended in 1995). These criteria have been supplemented by the USEPA in 40 CFR 131.38, the California Toxics Rule (CTR), adopted in May 2000. On March 2, 2000 the State Water Resources Control Board adopted the *Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Implementation Policy). The policy establishes implementation procedures for determining appropriate water quality standards and objectives. The priority pollutant criteria limitations in Order No. R9-2003-0179 have been determined using the California Permit Writer and Training Tool (CAPWTT) model, in accordance with the CTR and Implementation Policy, to adjust the applicable metals criteria, run a Reasonable Potential Analysis (RPA), and convert the resulting criteria into limitations.

CAPWTT model entry parameters for all constituents include: no dilution credits, receiving water hardness of 400 mg/l (recommended as the default in receiving waters with a hardness greater than 400 mg/l), and annual effluent and ambient data collected from 1999 through 2002. Only bis (2-ethylhexyl) phthalate was found to have a reasonable potential to cause or contribute to exceedance of the CTR water quality criteria. Consequently, effluent limits for this pollutant are specified in Order No. R9-2003-0179. If, at a later date, effluent monitoring data for the CTR priority pollutants demonstrates a reasonable potential for other pollutants to cause or contribute to exceedance of the CTR water quality criteria, this permit may be modified or amended to include new effluent limitations. Furthermore, if at any time the discharger feels that a criterion or objective is inappropriate for these particular receiving waters, the discharger may submit evidence to the Regional Board in support of designating a site-specific objective/criteria, in accordance with Section 5.2 of the Implementation Plan.

D. Chlorine Residual

Residual chlorine left over from the disinfection process may be toxic to aquatic organisms. Therefore, the permit contains limits for total residual chlorine. Although the Basin plan does not contain objectives for total residual chlorine, it does contain narrative objectives prohibiting discharges that cause toxicity to aquatic organisms. The total residual chlorine effluent limits in the permit are based on *USEPA's Quality Criteria for Water – 1986* ("Gold Book") (1986) and *Ambient Water Quality Criteria for Chlorine – 1984* (1985). The limits are the same as contained in Order No. 98-60.

E. Toxicity

The Implementation Policy requires chronic toxicity effluent limitations in permits for all discharges that will cause, have reasonable potential to cause, or contribute to chronic toxicity in receiving waters. The effluent from the PDWRF is analyzed quarterly for chronic toxicity using the fathead minnow (*Pimephales promelas*), water flea (*Ceriodaphnia dubia*), and green alga (*Selenastrum capricornutum*) as test species. A reasonable potential analysis was performed using the procedures prescribed in the *Technical Support Document for Water Quality-based Toxics Control* (USEPA 1991) using effluent chronic toxicity data from 1999 to 2003. The results indicate that the effluent from the PDWRF has a reasonable potential to cause chronic toxicity in the receiving water. Therefore, Order No. R9-2003-0179 contains narrative chronic whole effluent toxicity (WET) limitations, toxicity identification evaluation (TIE) and toxicity reduction evaluation (TRE) trigger conditions, and monitoring requirements, in accordance with EPA's Guidance of Implementing WET Testing Programs (May 31, 1996).

F. Recycled Water Use Critera

California Code of Regulations (CCR), Title 22 establishes criteria for the use, and purveyance of recycled water. Order No. R9-2003-0179 contains effluent limitations (for coliform, turbidity, and chlorination contact time) in accordance with CCR Title 22.

G. Anti-backsliding

The discharge limits contained in Order No. R9-2003 are as stringent or more stringent than those of the previous permit in accordance with anti-backsliding policies.

7. REPORTING REQUIREMENTS

Due dates for monitoring reports, as well as the units and unit abbreviations therein, were changed as appropriate to ensure consistency with reporting requirements in the State Water

Resources Control Board's (SWRCB's) *Water Quality Permit Standards Team; Final Report*, of April 1999.

8. RECEIVING WATER MONITORING

MRP No. R9-2003-0179 eliminates the furthest downstream receiving water monitoring station because it is too far downstream to provide useful information in assessing impacts from the PDWRF discharge on the receiving waters. Furthermore, the MRP reduces the required frequency of monitoring at the receiving water stations from biweekly between April 1 and October 1 and monthly between October 2 and March 31 to monthly all year. The MRP adds additional analyses, including chloriphyll-a concentration and macroinvertebrate and periphyton bioassessment, at those stations closer to the discharge to more accurately assess impacts to downstream water quality and beneficial uses. Furthermore, the MRP adds two new stations along Sycamore Creek within the Carlton Oaks Golf Course. The MRP has also been amended to require an annual discussion of the receiving water monitoring results.

9. ANTIDEGRADATION ANALYSIS

The Regional Board has taken into consideration the requirements of the State and Federal "antidegradation" policies and has determined that the subject discharge is consistent with the Antidegradation Policies for the following reasons:

A. The terms and conditions of Order No. R9-2003-0179 require that the existing beneficial uses and water quality of the San Diego River and/or its tributaries be maintained and protected;
B. The discharge limits contained in Order No. R9-2003-0179 require that the quality of the discharge be maintained at the levels required in the previous permit or improved;
C. The discharge from the PDWRF to the San Diego River and/or its tributaries is necessary to accommodate economic and social development important to the people of the communities of the San Diego region;
D. No surface waters covered under the terms and conditions of Order No. R9-2003-0179 have been designated an outstanding national resource water by the State Water Resources Control Board; and
E. No surface waters covered under Order No. R9-2003-0179 have been designated as ASBS by the State Water Resources Control Board.

10. STORM WATER REGULATION

On November 16, 1990, the USEPA promulgated NPDES permit application requirements for stormwater discharges (40 CFR Parts 122, 123, and 124) which are applicable to the PDWRF. On April 17, 1997 the SWRCB adopted Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated With Industrial Activities Excluding Construction

Activities. Stormwater discharges from PDMWD's PDWRF are subject to the terms and conditions of Water Quality Order No. 97-03-DWQ.

11. PRETREATMENT

The discharger is not required to have a pretreatment program pursuant to Section 307 of the Clean Water Act; Parts 35 and 403 of Title 40, Code of Federal Regulations (40 CFR 35 and 40 CFR 403); and/or Section 2233, Article 4, Subchapter 9, Chapter 3, Title 23, California Code of Regulations (CCR), because the discharge is less than 5 MGD. However, the City of San Diego, through agreement with the PDMWD, does regulate industries in the PDMWD service area.

12. BIOSOLIDS

Management of all solids and biosolid is required to comply with 40 CFR Parts 257, 258, 501, and 503; CWA Part 405(d); and Title 27 of the CCR, including all monitoring, record-keeping, and reporting requirements. Since the State of California, hence the Regional and State Boards, has not been delegated the authority by the USEPA to implement the biosolid program, enforcement of biosolid requirements of CFR Part 503 is under USEPA's jurisdiction. Once biosolid leaves the PDWRF, it is subject to all applicable local, state, and federal laws and regulations. At this time, all biosolids are discharged to the sanitary sewer and eventually removed by the City of San Diego wastewater treatment facilities.

13. PROCEDURE FOR FINAL DECISION

A. In accordance with 40 CFR 124.10, the RWQCB must issue a public notice that an NPDES permit has been prepared and that the permit will be brought before the RWQCB at a public hearing. The public notice must be issued at least 30 days prior to the public hearing. A public notice was published in the San Diego Union-Tribune on August 11, 2003 to notify the public of the RWQCB's intent to hold a public hearing on tentative Order No. R9-2003-0179 at it's September 10, 2003 meeting. Additionally, a Fact Sheet, tentative Order, and tentative monitoring and reporting program were mailed to all known interested parties on August 11, 2003.

B. The September 10, 2003 hearing was postponed . A notice is tentatively scheduled to be published in the San Diego Union-Tribune on October 10, 2003 to notify the public that the hearing has been rescheduled to the RWQCB's November 12, 2003 meeting.

C. Responses to all written comments received prior to the cancelled September 10, 2003 hearing were prepared, together with an errata sheet modifying the August 11, 2003 tentative order, and mailed to all interested parties on September 5, 2003. The changes contained in the Errata sheet have been incorporated into the attached version of the tentative Order.

D. All comments or objections received by the appropriate date will be considered in the formulation of the final permit. A public hearing is scheduled for the November 12, 2003 RWQCB meeting at the RWQCB Office, 9174 Sky Park Court, Suite 100, San Diego, California. The meeting is scheduled to begin at 9:00 A.M. Written statements may be presented at the public hearing, and all comments and objections will be considered by the RWQCB.

E. Persons wishing to comment upon or object to the NPDES permits are advised to submit their comments in writing, to the California Regional Water Quality Control Board, San Diego Region, 9174 Sky Park Court, Suite 100, San Diego, CA 92123-4340. To ensure that written comments are provided to the Regional Board for review prior to the hearing, written comments must be received at the Regional Board office no later than 5:00 pm on Wednesday, November 5, 2003.

F. For further information regarding this NPDES permits or public hearing, contact Mr. David Hanson in writing at the above address or by telephone at (858) 467-2724. Related documents and information are on file and may be viewed at the above address, telephone (858) 467-2952, fax (858) 571-6972. Review of files can be conducted Monday through Friday between the hours of 8:00 am to 5:00 pm.

G. After the close of the public hearing, the RWQCB may adopt a final order. The final order will become effective 10 days after the date of its adoption, unless a later date is specified by the RWQCB. The monitoring and reporting program will become effective January 1, 2004.

H. RWQCB adoption of the final order may be petitioned for review to the SWRCB. Petitions for review to the SWRCB must be filed in writing within thirty (30) days following the RWQCB adoption of the final order, and must be sent to the State Water Resources Control Board, P.O. Box 100, Sacramento, CA 95801.

14. REFERENCES FOR THE DETERMINATION OF NPDES WASTE DISCHARGE REQUIREMENTS

The following documents provide the necessary references for the basis of this NPDES permit:

A. Title 40 of the Code of Federal Regulations (CFR) Part 131, *Water Quality Standards*, *California Toxics Rule* (CTR).

B. 40 CFR Part 133 (40 CFR 133), Secondary Treatment Regulation.

C. USEPA NPDES Permit Writers' Course Workbook, January 28 – February 1, 2002.

D. *USEPA NPDES Permit Writers' Manual*, December 1996.

E. USEPA *Whole Effluent Toxicity (WET) Control Policy*, July 1994.

F. USEPA *Region 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs*, May 31, 1996.

G. USEPA *Technical Support Document for Water Quality-based Toxics Control*, March 1991.

H. USEPA *Quality Criteria for Water – 1986* ("Gold Book"), 1986.

I. USEPA *Ambient Water Quality Criteria for Chlorine – 1984*, 1985.

J. USEPA *Nutrient Criteria Technical Guidance Manual for Rivers and Streams*, July 2000.

K. USEPA *Ambient Water Quality Criteria Recommendations, Information Supporting the Development of State and Tribal Nutrient Criteria, Rivers and Streams in Nutrient Ecoregion III*, December 2000.

L. USEPA *Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers, Periphyton, Benthic Macroinvertebrates, and Fish, Second Addition*, July 1999.

M. SWRCB *Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Implementation Policy), March 2000.

N. SWRCB *Implementation Policy Course Workbook,* June 2002.

O. SWRCB *California Permit Writer Training Tool* (CAPWTT) model software.

P. Title 22 California Code of Regulations (CCR), *Drinking Water Standards* and *Water Recycling Criteria*.

Q. SWRCB *Water Quality Permit Standards Team Final Report*, April 1999.

R. SWRCB *Administrative Procedures Manual*, May 1998.

S. RWQCB *Water Quality Control Plan Report for the San Diego Basin (9)* (Basin Plan), September 8, 1994.

T. RWQCB *Ambient Bioassessment Monitoring Reports: 1999 Annual Report, 2001 Annual Report, and 2002 Final Report and Preliminary Index of Biotic Integrity*, September 2002.

U. PDMWD *Report of Waste Discharge and Application for Renewal of NPDES Permit No. CA0107492* submitted on December 20, 2002 and supplemental material submitted on April 24, 2003.

V. RWQCB Order Nos. 93-48 and 98-60, NPDES Permit No. CA0107492, *Waste Discharge Requirements for Padre Dam Municipal Water District Padre Dam Water Recycling Facility Discharge to Sycamore Creek and the San Diego River, San Diego County*.

November 12, 2003

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. R9-2003-0179
NPDES PERMIT NO. CA0107492

WASTE DISCHARGE REQUIREMENTS FOR THE PADRE DAM MUNICIPAL WATER DISTRICT PADRE DAM WATER RECYCLING FACILITY DISCHARGE TO SYCAMORE CREEK AND THE SAN DIEGO RIVER SAN DIEGO COUNTY

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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ORDER NO. R9-2003-0179
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WASTE DISCHARGE REQUIREMENTS FOR THE
PADRE DAM MUNICIPAL WATER DISTRICT
PADRE DAM WATER RECYCLING FACILITY
DISCHARGE TO
SYCAMORE CREEK AND THE SAN DIEGO RIVER
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On June 10, 1998, this Regional Board adopted Order No. 98-60, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0107492, *Waste Discharge Requirements for Padre Dam Municipal Water District (PDMWD) Padre Dam Water Recycling Facility (PDWRF) Discharge to Sycamore Creek and the San Diego River, San Diego County*. Order No. 98-60 established requirements for the discharge of up to 2.0 million gallons per day (MGD) of tertiary treated municipal wastewater from the PDWRF through the Santee Lakes, to Sycamore Creek, tributary to the San Diego River.

2. On December 10, 1997, this Regional Board adopted Order No. 97-49, *Waste Discharge and Water Recycling Requirements for the Production and purveyance of Recycled Water for Padre Dam Municipal Water District*. Order No. 97-49 establishes requirements for the discharge to land of up to 2.0 MGD from the PDWRF.

3. Pursuant to Reporting Requirement E.14 of Order No. 98-60, PDMWD was required to submit their report of waste discharge 180 days prior to the June 21, 2003 expiration date. On December 20, 2002, the PDMWD submitted a complete NPDES permit application for the renewal of Order No. 98-60. Since the discharger has submitted a complete application for renewal of the NPDES permit, Order No. 98-60 is administratively extended until the adoption of tentative Order No. R9-2003-0179 pursuant to Title 40 of the Code of Federal Regulations (CFR), Part 122.41(b) [40 CFR 122.41(b)].

4. PDMWD owns and operates the PDWRF located in Sycamore Canyon in Santee, California (Latitude- 32 Deg. 50 Min. 30 Sec. North, Longitude- 117 Deg. 00 Min. 10 Sec. West). The PDWRF has a rated average capacity of 2.0 mgd. PDMWD collects wastewater from City of Santee, a portion of the City of El Cajon, and portions of the unincorporated communities of El Cajon and Lakeside. Total wastewater collection within the PDMWD sewered area for year 2002 (through October 2002) averaged 4.98 MGD. Of this total, 3.27 MGD was directed to the City of San Diego Metropolitan (Metro) wastewater collection system and 1.71 MGD was directed to the PDWRF. The average discharge to Lake No. 7 was 0.8 MGD and the average discharge from Lake No. 1 to Sycamore Creek was 0.7 MGD. Monthly

average flow rates from Lake No. 1 to Sycamore Creek ranged from 1.5 MGD in the winter to no discharge during the summer.

5. The PDWRF has primary, secondary, and tertiary treatment processes. Primary clarifiers remove settleable solids and floating material, which are directed back into the Metro system. Secondary treatment is provided through the Bardenpho process that involves a series of aeration and anoxic stages to achieve biological removal of nitrogen and phosphorous. After biological treatment, flow is directed to secondary clarifiers where settleable solids and floating material is removed. The waste sludge is directed to the Metro system. The tertiary process is designed to comply with the State of California Department of Health Services (DHS) regulations for "disinfected, filtered wastewater" for unrestricted use of recycled wastewater. Tertiary treatment is provided through alum and polymer addition, flocculation and sedimentation, denitrifying filtration, chlorination, and dechlorination.

6. The effluent from the PDWRF not recycled for irrigation and industrial use is discharged to the Santee Lakes, a series of seven man-made lakes. PDMWD owns and operates the Santee Lakes as a recreational facility. These artificial lakes are not waters of the United States. Effluent first enters Lake No. 7 and flows by gravity through each lake until eventually reaching Lake No. 1, which flows into Sycamore Creek, a tributary of the San Diego River. Sycamore Creek flows through decorative ponds within the Carlton Oaks Country Club golf course for approximately one mile before entering the San Diego River.

7. The Lower San Diego River is a 20-mile urban waterway in the San Diego River Watershed of Region 9 with year-round flow. The San Diego River originates in the East County, passing through Lakeside and Santee, and then runs parallel to Interstate 8 all the way to the Pacific Ocean coastline where it discharges near Ocean Beach. The lower portion of the river begins just north of Lake Jennings, near the town of Lakeside.

8. In accordance with Section 2200, Title 23 of the California Code of Regulations (CCR), the threat to water quality and complexity of the discharge from the PDWRF is determined to be category 1A.

9. The terms, conditions, and limitations of this Order have been developed to protect the beneficial uses and water quality of the receiving waters, including groundwater basins.

10. The *Water Quality Control Plan, San Diego Basin (9)* (hereinafter Basin Plan) was adopted by this Regional Board on September 8, 1994 and subsequently approved by the State Water Resources Control Board (State Board) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board. The Basin Plan designates beneficial uses, narrative and numerical water quality objectives, and prohibitions, which are applicable to the discharge regulated under this NPDES permit.

11. The discharge point is located in the Sycamore Canyon portion of the San Diego River watershed. The Basin Plan identifies the following beneficial uses of surface waters of the Mission San Diego and Santee Hydrologic Subareas (HSA 7.11 and HSA 7.12), which includes Sycamore Creek and the San Diego River:

a. agricultural supply (AGR)
b. industrial service supply (IND)
c. contact and non-contact water recreation (REC1 and REC2)
d. warm freshwater habitat (WARM)
e. cold freshwater habitat (COLD)
f. wildlife habitat (WILD)
g. preservation of rare, threatened or endangered species (RARE)

12. The Basin Plan identifies the following beneficial uses of ground waters of the Mission San Diego and Santee Hydrologic Subareas (HSA 7.11 and HSA 7.12):

a. municipal and domestic supply (MUN)
b. industrial service and process supply (IND and PROC)
c. agricultural supply (AGR)

13. In order to protect designated beneficial uses, the Basin Plan establishes water quality objectives (for bacteriological, physical, chemical, and biological characteristics, and for radioactivity), general requirements for management of waste discharged to the inland surface waters, quality requirements for waste discharges (effluent quality requirements), discharge prohibitions, and general provisions. The Basin Plan also contains prohibitions applicable to surface waters subject to tidal influence and for inland surface waters. The applicable prohibitions and discharge provisions of the Basin Plan have been incorporated herein.

14. The Basin Plan establishes surface and ground water quality objectives for HSAs 7.11 and 7.12. These objectives are identified in Tables 3-2 and 3-3 of the Basin Plan. The table below identifies the most restrictive water quality objectives for any of these HSAs (the concentrations listed may not be exceeded more than 10% of the time during any one year period).

Constituent	Unit	Surface Water	Ground Water
Total Dissolved Solids (TDS)	mg/l	1000	1000
Chloride	mg/l	400	400
Sulfate	mg/l	500	500
Percent Sodium	%	60	60
Nitrogen & Phosphorous	mg/l	*	--
Nitrate	mg/l	--	45
Iron	mg/l	1.0	0.3
Manganese	mg/l	1.0	0.05
Methylene Blue Active Substances (MBAS)	mg/l	0.5	0.5
Boron	mg/l	1.0	0.75
Odor	--	None	None
Turbidity	NTU	20	5

Constituent	Unit	Surface Water	Ground Water
Color	Units	20	15
Fluoride	mg/l	--	1.0
* = Concentrations of nitrogen and phosphorous, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total phosphorous (P) concentrations shall not exceed 0.05 mg/L in any stream at the point where it enters any standing body of water, nor 0.025 mg/L in any standing body of water. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/L total P. These values are not to be exceeded more than 10% of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorous are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1 shall be used.			

15. Order No. 98-60 established alternate effluent limitations for nitrogen and phosphorus in accordance with Chapter 4 of the Basin Plan, with the condition that the discharger develop and implement a watercourse monitoring and management plan (WMMP). The data generated from the WMMP indicates that the total nitrogen and total phosphorous concentrations in the downstream receiving waters are greater than the Basin Plan objectives of 1.0 and 0.1 mg/L, respectively. Furthermore, this Order contains revised nutrient effluent mass emission rate (MER) limitations in accordance with the objectives established in the Basin Plan.

16. Preliminary benthic macroinvertebrate analyses performed in the lower San Diego River receiving waters (downstream of the discharge) in 1998, 1999, and 2000 indicate a "fair to poor" index of biotic integrity (IBI), which is a multimetric analytical approach recommended by the United States Environmental Protection Agency (USEPA) for assessing the overall "ecological health" of an aquatic community. However, there is no correlation established between the elevated nutrient loading and the "fair to poor" rating.

17. The SWRCB adopted the 2002 Clean Water Act section 303(d) list of water quality limited segments at its February 4, 2003 Board Meeting. The list was approved by the United States Environmental Protection Agency (USEPA) Region 9 on July 25, 2003. The Lower San Diego River (HSA 7.11 and HSA 7.12) is listed as an impaired water body due to elevated fecal coliform, low dissolved oxygen, elevated phosphorus, and elevated total dissolved solids. If/when Waste Load Allocations (WLAs) are calculated in accordance with Total Maximum Daily Load (TMDL) procedures, the limits contained in this or subsequent Orders will be modified accordingly.

18. The discharger is not required to have a pretreatment program pursuant to Section 307 of the Clean Water Act; Parts 35 and 403 of Title 40, Code of Federal Regulations (40 CFR 35 and 40 CFR 403); and/or Section 2233, Article 4, Subchapter 9, Chapter 3, Title 23, California Code of Regulations, because the discharge is less than 5 MGD. However, the City of San Diego, through agreement with the PDMWD, does regulate industries in the PDMWD service area.

19. On November 16, 1990, the USEPA promulgated NPDES permit application requirements for stormwater discharges (40 CFR Parts 122, 123, and 124) which are applicable to the PDMWD PDWRF. On April 17, 1997 the State Water Resources Control Board (SWRCB) adopted Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated With Industrial Activities Excluding Construction Activities. Stormwater discharges from PDMWD's PDWRF are subject to the terms and conditions of Water Quality Order No. 97-03-DWQ.

20. Effluent limitations, industrial pretreatment standards, biosolid use and disposal regulations, and criteria established under Sections 208(b) , 301, 302, 303(d) , 304, 306, 307, 403 and 405 of the Clean Water Act, as amended (33 U.S.C. 1251 et seq.), are applicable to the discharge.

21. The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal "antidegradation" policies and has determined that:

    a. The terms and conditions of this Order require that the existing beneficial uses and water quality of the San Diego River and/or its tributaries be maintained and protected;

    b. The discharge from the PDWRF to the San Diego River and/or its tributaries in accordance with approved plans indicated in the findings is necessary to accommodate economic and social development important to the people of the communities of the San Diego region;

    c. No surface waters covered under the terms and conditions of this Order have been designated an outstanding national resource water by the State Water Resources Control Board; and

    d. No surface waters covered under this order have been designated as Areas of Special Biological Significance (ASBS) by the State Water Resources Control Board.

22. The Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16 and finds that a discharge in compliance with this Order is consistent with these Antidegradation Policies.

23. This Order complies with Section 402(o) of the Federal Clean Water Act, and the implementing regulations of 40 CFR 122.44(l) which prohibit the establishment of effluent limits in a renewed, reissued or modified NPDES permits that are less stringent than the limits established in the previous permit.

24. This Order shall serve as an NPDES permit for the discharge of treated wastewater from the PDMWD PDWRF to Sycamore Creek, the San Diego River, and/or its tributaries pursuant to Section 402 of the CWA and amendments thereto.

25. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:

    a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;
    b. Other waste discharges;
    c. The need to prevent nuisance;
    d. Past, present, and probable future beneficial uses of the waters under consideration;
    e. Environmental characteristics of the waters under consideration;
    f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
    g. Economic considerations; and
    h. The need for developing housing within the region.

26. The issuance of waste discharge requirements for this discharge is exempt from the requirement for preparation of environmental documents under the CEQA (Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.) in accordance with the California Water Code, Section 13389.

27. The Regional Board has considered all water resource related environmental factors associated with the discharge of treated wastewater from PDMWD's PDWRF to Sycamore Creek, the San Diego River, and/or its tributaries.

28. The Regional Board has notified PDMWD and all known interested parties of its intent to issue NPDES permit requirements for the proposed discharge of waste.

29. The Regional Board has, at a public meeting, heard and considered all comments pertaining to the discharge of treated wastewater from PDMWD's PDWRF to Sycamore Creek, the San Diego River, and/or its tributaries.

IT IS HEREBY ORDERED, that PDMWD (hereinafter discharger), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. Compliance with the Waste Discharge Prohibitions, as stated in the 1994 Basin Plan (Attachment 1), is required as a condition of this order.

2. Discharge to the San Diego River and contiguous waters from the PDWRF at average daily flowrate in excess of 2.0 MGD is prohibited.

3. The discharge of waste at point(s) other than the discharge point from Lake No. 1 to Sycamore Creek, which have not been specifically described in the report of waste discharge and for which valid waste discharge requirements are not in force, is prohibited.

4. The discharge of oil, trash or other solids directly to surface water or in any manner which may permit it to be washed into a surface water is prohibited.

5. The discharge of municipal and industrial waste sludge and untreated sludge digester supernatant, centrate, or filtrate to the San Diego River and/or its tributaries is prohibited.

6. The deposition of rubbish or refuse into surface waters or at any place where they would be eventually transported to the San Diego River and/or its tributaries is prohibited.

7. The discharge of waste shall not cause surface erosion or scouring of aquatic substrates.

8. The discharge of any substances in concentrations toxic to human, animal, plant or aquatic life is prohibited. Compliance with this toxicity prohibition shall be evaluated at the discharge from Lake No. 1 to Sycamore Creek.

B. DISCHARGE SPECIFICATIONS

The discharge of treated wastewater from the PDWRF containing pollutants in excess of the following effluent limitations is prohibited:

1. The monthly average percent removal for Biochemical Oxygen Demand (BOD, performed at 20ºC for 5 days) shall not be less than 85%.

2. The monthly average percent removal for Total Suspended Solids (TSS) shall not be less than 85%.

3. Total coliform concentration of the effluent shall not exceed a MPN (most probable number) of 2.2 per 100 mL, based on the median of the results of the last 7 days for which analyses

have been completed; and shall not exceed a MPN of 23 per 100 mL in more than one sample in any 30-day period. No samples shall exceed an MPN of 240/100 mL.

4. Turbidity concentration of the filter effluent prior to chlorination shall not exceed a daily average value of 2 Nephelometric Turbidity Units (NTU), shall not exceed 5 NTU more than 5% of the time during a 24-hour period, and shall not exceed 10 NTU at any time.

5. Limitations for Major Properties of Wastewater

Constituent	Unit	Limit		
		Daily Maximum	Weekly Average	Monthly Average
BOD	mg/l lb/day	25 417	23 375	15 250
TSS	mg/l lb/day	25 417	23 375	15 250
oil and grease	mg/l lb/day	7.5 125	--	5 83
chlorine residual[1]	µg/l lb/day	20 0.33	8.0 0.13	2.0 0.033
pH	units	Between 6.5 and 8.5 at all times		

Notes:
1. Compliance with these limitations shall be evaluated at the discharge from Lake No. 1 to Sycamore Creek.

6. California Toxics Rule (CTR) Effluent Limitations

Constituent	Unit	Limit	
		Daily Maximum	Monthly Average
bis (2-ethylhexyl) pthalate	µg/L lb/day	12 0.20	5.9 0.098

7. Limitations for Basin Plan Constituents

Constituent	Unit	Limit	
		Daily Maximum	12-month Average
total dissolved solids	mg/L lb/day	1000 25,020	-- --
percent sodium	%	60	--
chloride	mg/L lb/day	400 6,672	-- --
sulfate	mg/L lb/day	500 8,340	-- --

Constituent	Unit	Limit	
		Daily Maximum	12-month Average
nitrogen (total)[1]	mg/L lb/day	-- --	-- 17
phosphorous (total)[1]	mg/L lb/day	-- --	-- 1.7
nitrate	mg/L lb/day	45 751	-- --
iron	mg/L lb/day	0.3 5.0	-- --
manganese	mg/L lb/day	0.05 0.83	--
MBAS	mg/L lb/day	0.5 8.3	--
boron	mg/L lb/day	0.75 13	--
color	Units	20	--
fluoride	mg/L lb/day	1.0 17	--
ammonia (un-ionized)	mg/L lb/day	0.025 0.42	--
odor	units	none	none

Notes:
1. Compliance with these limitations shall be evaluated at the discharge from Lake No. 1 to Sycamore Creek.

C. RECEIVING WATER LIMITATIONS

The discharge from the PDWRF shall not, by itself or jointly with any other discharge, cause violations of the following receiving water quality objectives:

1. Bacteriological standards

   a. In waters designed for contact recreation (REC1) the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 ml, nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 ml.

   b. In waters designated for noncontact recreation (REC2), and not designated for contact recreation (RECl), the average fecal coliform concentration for any 30-day period, shall not exceed 2,000 per 100 ml nor shall more than 10 percent of samples collected during any 30-day period exceed 4,000 per 100 ml.

c. In waters designated for contact recreation (REC1) the monthly average *E. coli* concentration shall not exceed 126/100 ml and the maximum concentration shall not exceed 576/100 ml.

d. In bays and estuaries, the most probable number of coliform organisms in the upper 60 feet of the water column shall be less than 1,000 per 100 ml provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml, and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml.

e. At all areas where shellfish may be harvested for human consumption (SHELL), the median total coliform concentration for any 30-day period shall not exceed 70 per 100 ml nor shall more than 10 percent of the samples collected during any 30-day period exceed 230 per 100 ml for a five-tube decimal dilution test or 330 per 100 ml when a three-tube decimal dilution test is used.

2. Dissolved oxygen (DO) levels shall not be less than 5.0 mg/l in inland surface waters with designated WARM beneficial uses or less than 6.0 mg/l in waters designated as COLD beneficial uses. The annual mean dissolved oxygen concentration shall not be less than 7.0 mg/l more than 10 percent of the time.

3. Changes in normal ambient pH levels shall not exceed 0.5 units. The pH shall not be depressed below 6.5 nor raised above 8.5 units.

4. The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/L (as N).

5. Concentrations of nitrogen and phosphorous, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth.

6. Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. The natural color of fish, shellfish or other resources shall not be impaired.

7. Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses.

8. Waters shall not contain oils, greases, waxes or other materials in concentrations which result in a visible film or coating on the surface of the water or on objects in the water, or which cause nuisance or which adversely affect beneficial uses.

9. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.

10. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

11. Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses.

12. Waters shall not contain taste or odor producing substances at concentrations which cause a nuisance or adversely affect beneficial uses. The natural taste and odor of fish, shellfish or other regional water resources used for human consumption shall not be impaired.

13. The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alterations in temperature does not adversely affect beneficial uses.

14. All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Board.

15. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

D. PROVISIONS

1. The discharge shall comply with the attached Monitoring and Reporting Program No. R9-2003-0179.

2. The discharger must comply with all conditions of this Order. Any permit noncompliance constitutes a violation of the CWA and the California Water Code, and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of an application for permit renewal, modification, or reissuance.

3. The discharger must comply with all standard provisions, where applicable, as stated in 40 CFR 122 (see Attachment No. 2) and Additional Standard Provisions (Attachment No. 3), which are incorporated into this permit by reference.

4. The discharger shall comply with all existing federal and state laws and regulations that apply to its sewage sludge use and disposal practice(s), and with the CWA Section 405(d) and 40 CFR Part 257.

5. The discharger shall report sewer overflow events that occur at the PDWRF. For purposes of this provision, a sewer overflow event is a discharge of treated or untreated wastewater at a location not authorized by waste discharge requirements and/or NPDES permit which results from a pump station failure, sewer line break, obstruction, surcharge, or any other operational dysfunction. This requirement applies to all sewer overflow events other than those events

subject to regulation under this Regional Board's Order No. 96-04, *General Waste Discharge Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies.*

a. If a sewer overflow event results in a discharge of 1,000 gallons or more, or results in a discharge to surface waters (any volume), the discharger shall report the sewer overflow event to the Regional Board by any available means, including telephone, voice mail, or FAX, within 24 hours from the time that 1) discharger has knowledge of the sewer overflow, 2) notification is possible, and 3) notification can be provided without substantially impeding cleanup or other emergency measures. Notification may be made after normal business hours by leaving a message for the Regional Board on voice mail or FAX.

   (1) For the purpose of this requirement, surface waters include navigable waters, rivers, streams (including ephemeral streams), lakes, playa lakes, natural ponds, bays, the Pacific Ocean, lagoons, estuaries, man-made canals, ditches, dry arroyos, mudflats, sandflats, wet meadows, wetlands, swamps, marshes, sloughs and water courses, and storm drains tributary to surface waters. The term includes waters of the United States as used in the federal Clean Water Act (see 40 CFR 122.2)

   (2) The information reported to the Regional Board in the initial report shall include the name and phone number of the person reporting the sanitary sewer overflow, the responsible sanitary sewer system agency, the estimated total sewer overflow volume, the location, the receiving waters, whether or not the sewer overflow is still occurring at the time of the report, and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.

b. If the sewer overflow event results in a discharge of 1,000 gallons or more, or results in a discharge to surface waters (any volume), the discharger shall complete a copy of the Sanitary Sewer Overflow Form attached to Monitoring and Reporting Program No. 96-04, and submit the completed Sanitary Sewer Overflow Report form, along with any additional correspondence, to the Regional Board no later than 5 days following the starting date of the sanitary sewer overflow. Additional correspondence and follow-up reports should be submitted to the Regional Board, as necessary, to supplement the Sanitary Sewer Overflow Report Form to provide detailed information on cause, response, adverse effects, corrective actions, preventative measures, or other information.

c. The discharger shall report all sewer overflows, regardless of volume or final destination, in the next quarterly self-monitoring report, in accordance with the format described in Order No. 96-04.

6. The discharger shall also notify the Regional Board, the California Department of Health Services (DHS), and the San Diego County Department of Environmental Health (DEH) within 24 hours of when it becomes aware of any of the following:

a. Failure of chlorination equipment
b. Effluent Total Coliform bacteria greater than 240 MPN/100 mL.
c. Effluent turbidity greater than 10 NTU
d. CT less than 450 mg-min./L

7. Within 180 days from the adoption of this Order, the discharger shall submit a revised Engineering Report for the PDWRF, in accordance with guidelines established under Title 22 CCR, Articles 7 through 10, to the RWQCB, and the DHS. This report shall include the results of:

   a. An alarm simulation shut down test, in the presence of a staff member from the Regional Board and a sanitary engineer from the California DHS, to ensure that the PDWRF is properly operating.

   b. The modal contact time of the chlorination chamber, as defined under Title 22, Division 4, Chapter 3, Section 60301.600, from a tracer study conducted to ensure that the effluent meets the requirements of Title 22.

8. Chlorination shall be with a disinfection process providing a CT (chlorine concentration times modal contact time) value of at least 450 mg-min/liter at all times at the end of the contact chamber, with a minimum modal chlorine contact time of at least 90 minutes, based on peak dry weather design flow.

9. The discharger shall submit reports and provide notifications to the Regional Board and other agencies as specified in this Order. Reports and notifications submitted to the Regional Board shall be made to:

   California Regional Water Quality Control Board
   San Diego Region
   POTW Compliance Unit
   9174 Sky Park Court, Suite 100
   San Diego, California 92123-4340
   Telephone: (858) 467-2952
   Fax: (858) 571-6972

10. The discharger shall maintain a Sewer Overflow Prevention Plan (SOPP), specific to the treatment facility and the downstream conveyance system, in an up-to-date condition and shall amend the SOPP whenever there is a change (e.g. in the design, construction, operation, or maintenance of the sewerage system or sewerage facilities) which materially affects the potential for sewer overflows. The discharger shall review and amend the SOPP as appropriate after each sewer overflow from the facility. The SOPP and any amendments thereto, shall be subject to the approval of the Executive Officer and shall be modified as directed by the Executive Officer. The discharger shall submit the SOPP and any amendments thereto to the Executive Officer upon request of the Executive Officer. The

discharger shall ensure that the up-to-date SOPP is readily available to facility personnel at all times and that facility personnel are familiar with it.

11. The discharger shall maintain a Sewer Overflow Response Plan (SORP), specific to the treatment facility and the downstream conveyance system. The SORP shall establish procedures for responding to overflows from the facility so as to (a) minimize the overflow volume which enters surface waters, and (b) minimize the adverse effects of overflows on water quality and beneficial uses. The discharger shall maintain the SORP in an up-to-date condition and shall amend the SORP as necessary to accomplish these objectives. The discharger shall review and amend the SORP as appropriate after each overflow. The SORP, and any amendments thereto, shall be subject to the approval of the Executive Officer and shall be modified as directed by the Executive Officer. The discharger shall submit the SORP and any amendments thereto to the Executive Officer upon request of the Executive Officer. The discharger shall ensure that the up-to-date SORP is readily available to facility personnel at all times and that facility personnel are familiar with it.

12. Appropriate Treatment Plant Operations and Maintenance (O&M) manual(s) shall be posted at a prominent location at the permitted treatment or disposal facility, and shall be available to operating and/or on-site personnel at all times. The O&M manual(s) shall be prepared, revised, and/or updated by qualified engineers to account for any changes in plant operations or processes. The O&M manual(s) shall be reviewed by the discharger at least once every three years. The discharger shall certify, in writing, to this RWQCB that appropriate, updated, and accurate O&M manual(s) are utilized at the treatment or disposal facility, or that modifications to the manual(s) are required, the details of the revisions necessary, and the date and method of completion.

13. Supervisors and operators of the discharger's wastewater treatment facilities shall possess a certificate of appropriate grade in accordance with Chapter 14 of Division 4 of Title 23 of the California Code of Regulations. All operating personnel will be of appropriate grade to perform the operations and/or maintenance they are assigned to. The Annual Report will include the grade certifications of all operating personnel and summaries of any training received in the previous calendar year.

14. All proposed new treatment facilities and expansions of existing treatment facilities shall be completely constructed and operable prior to initiation of the discharge from the new or expanded facilities. The discharger shall submit a certification report for each new treatment facility, expansion of an existing treatment facility, and re-rating of an existing treatment facility. For new treatment facilities and expansions, the certification report shall be prepared by the design engineer. For re-ratings, the certification report shall be prepared by the engineer who evaluated the treatment facility capacity. The certification report shall:

    a. Identify the design capacity of the treatment facility;
    b. Certify the adequacy of each component of the treatment facility; and
    c. Contain a requirement-by-requirement analysis, based on acceptable engineering practices, of how the process and physical design of the facility will ensure compliance with this Order.

The signature and engineering license number of the engineer preparing the certification report shall be affixed to the report. The certification report, should, if possible, be submitted prior to beginning construction. The discharger shall not initiate a discharge from a new treatment facility or initiate a discharge from an existing treatment facility at a 30-day average dry weather flowrate in excess of its previously approved design capacity until:

a. The certification report is received by the Executive Officer;
b. The Executive Officer has received written notification of the completion of construction (new treatment facilities and expansions only); and
c. An inspection of the plant has been made by the Regional Board staff (new treatment facilities and expansions only).
d. The Executive Officer has provided the discharger with written authorization to discharge at a 30-day average dry weather flowrate not to exceed the revised design capacity.

15. All waste treatment, containment and disposal facilities shall be protected against 100-year peak stream flows as defined by the San Diego County flood control agency.

16. All waste treatment, containment and disposal facilities shall be protected against erosion, overland runoff and other impacts resulting from a 100-year frequency 24-hour storm.

17. This Order expires November 12, 2008, after which, the terms and conditions of this permit are automatically continued pending issuance of a new permit provided that all requirements of the federal NPDES regulations on the continuation of expired permits are complied with. [40CFR 122.6, 23 CCR 2235.4].

18. Order No. 98-60 is rescinded when this Order becomes effective.

E. BIOSOLID REQUIREMENTS

1. Management of all solids and biosolid must comply with all requirements of 40 CFR Parts 257, 258, 501, and 503; CWA Part 405(d); and CCR Title 27, including all monitoring, record-keeping, and reporting requirements. Since the State of California, hence the Regional and State Boards, has not been delegated the authority by the USEPA to implement the biosolid program, enforcement of biosolid requirements of CFR Part 503 is under USEPA's jurisdiction.

2. All solids and biosolid must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a biosolid-only landfill in accordance with 40 CFR Parts 503 and 258, and CCR Title 27. If the discharger decides to dispose of solids or biosolid by a different method, a request for permit modification must be submitted to the USEPA and this Regional Board 180 days prior to alternative disposal.

3. Solids, and biosolid treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.

4. The solid and biosolid treatment and storage sites shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and prevent drainage from the treatment and storage sites. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

5. The discharge of sewage biosolid and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the state.

6. The discharger shall submit a copy of each of the annual reports required by 40 CFR 503 to this Regional Board at the same time those reports are submitted to the USEPA. The discharger shall also submit an annual report of the quantity and disposition of biosolid generated in the previous calendar year. No annual reports are required if all biosolids are returned to the sanitary sewer and conveyed to the City of San Diego for disposal.

I, John H. Robertus, Executive Officer of the San Diego Regional Water Quality Control Board, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on November 12, 2003.

JOHN H. ROBERTUS
Executive Officer

ATTACHMENT NO. 1

1994 WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO BASIN (BASIN PLAN) WASTE DISCHARGE PROHIBITIONS

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person as defined by Section 13050(c) of the California Water Code and to any person who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.

2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264, is prohibited.

3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code §13376) is prohibited

4. The discharge of treated or untreated waste to lakes or reservoirs used for municipal water supply, or to inland surface water tributaries thereto, is prohibited.

5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.

7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.

8. Any discharge to a storm water conveyance system that is not composed entirely of storm water is prohibited unless authorized by the Regional Board. (The federal regulations,

40CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharge resulting from fire fighting activities.) (§122.26 amended at 56 FR 56553, November 5, 1991 57 FR 11412, April 2, 1992).

9. The authorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.

10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.

11. The discharge of radioactive waste amenable to alternative methods of disposal into the waters of the state is prohibited.

12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.

13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.

14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.

17. The discharge of treated sewage from vessels to portion of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.

18. The discharge of treated sewage from vessels, which do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep a mean lower low water (MLLW) is prohibited.

ATTACHMENT NO. 2

40 CFR STANDARD PROVISION REFERENCES

40 CFR 122.1 Purpose and scope

40 CFR 122.1(a) and (b).

40 CFR 122.2 Definitions

40 CFR 122.2(all).

40 CFR 122.3 Exclusions

40 CFR 122.3(a) through (g).

40 CFR 122.4 Prohibitions (applicable to State programs, see Section 123.25).

40 CFR 122.4(a) through (i).

40 CFR 122.5 Effect of a permit (applicable to State programs, see Section 123.25).

40 CFR 122.5(a) through (c).

40 CFR 122.6 Continuation of expiring permits

40 CFR 122.6(b) through (d).

40 CFR 122.7 Confidentiality of information (applicable to State programs, see Section 123.25).

40 CFR 122.7 (a) through (c).

40 CFR 122.21 Application for a Permit (applicable to State programs, see Section 123.25).

40 CFR 122.21(a) through (q).

40 CFR 122.22 Signatories to permit applications and reports (applicable to State programs, see Section 123.25).

(a) Applications. All applications shall be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the

corporation, or (ii) the manager of one or more manufacturing, production, operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

NOTE: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in Section 122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under §122.22(a)(1)(ii) rather than to specific individuals.

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

(b) All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,

(3) The written authorization is submitted to the Director.

(c) Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this

section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

40 CFR 122.23 Concentrated animal feeding operations (applicable to State programs, see Section 123.25).

40 CFR 122.23(a) through (c).

40 CFR 122.24 Concentrated aquatic animal production facilities (applicable to State programs, see Section 123.25).

40 CFR 122.24(a) through (c).

40 CFR 122.25 Aquaculture projects (applicable to State programs, see Section 123.25).

40 CFR 122.25(a) and (b).

40 CFR 122.26 Storm water discharges (applicable to State programs, see Section 123.25).

40 CFR 122.26(a) through (g).

40 CFR 122.27 Silvicultural activities (applicable to State programs, see Section 123.25).

40 CFR 122.27(a) and (b).

40 CFR 122.28 General permits (applicable to State programs, see Section 123.25).

40 CFR 122.28(a) and (b).

40 CFR 122.29 New sources and new dischargers.

40 CFR 122.29(a) through (d).

40 CFR 122.30 through 122.37 (Various sections on regulation of small MS4's).

40 CFR 122.41 Conditions applicable to all permits (applicable to State programs, see Section 123.25).

The following conditions apply to all NPDES permits. Additional conditions applicable to NPDES permits are in Section 122.42. All conditions applicable to NPDES permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations (or the corresponding approved State regulations) must be given in the permit.

(a) Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(1) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

(2) The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The Clean Water Act provides that any person who negligently violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger

of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

(3) Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

(b) Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

(c) Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(e) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

(f) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(g) Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

(h) Duty to provide information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for

modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

(i) Inspection and entry. The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

(j) Monitoring and records.

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

(3) Records of monitoring information shall include:

i) The date, exact place, and time of sampling or measurements;

ii) The individual(s) who performed the sampling or measurements;

iii) The date(s) analyses were performed;

iv) The individual(s) who performed the analyses;

v) The analytical techniques or methods used; and

vi) The results of such analyses.

(4) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 136 unless otherwise specified in 40 CFR part 503, unless other test procedures have been specified in the permit.

(5) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

(k) Signatory requirement.

(1) All applications, reports, or information submitted to the Director shall be signed and certified. (See 40 CFR 122.22)

(2) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(l) Reporting requirements.

(1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in §122.29(b); or

ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are subject neither to effluent limitations in the permit, nor to notification requirements under §122.42(a)(1).

iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported

during the permit application process or not reported pursuant to an approved land application plan;

(2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

(3) Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (See §122.61; in some cases, modification or revocation and reissuance is mandatory.)

(4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 136 unless otherwise specified in 40 CFR part 503, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

(5) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(6) Twenty-four hour reporting.

i) The permittee shall report any noncompliance, which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

ii) The following shall be included as information, which must be reported within 24 hours under this paragraph.

A. Any unanticipated bypass which exceeds any effluent limitation in the Permit (See 40 CFR 122.41(g)).

B. Any upset which exceeds any effluent limitation in the permit.

C. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 CFR 122.44(g)).

iii) The Director may waive the written report on a case-by-case basis for reports under paragraph (l)(6)(ii) of this section if the oral report has been received within 24 hours.

(7) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (l)(4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section.

(8) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

(m) Bypass.

(1) Definitions.

i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (m)(3) and (m)(4) of this section.

(3) Notice

i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (l)(6) of this section (24-hour notice).

(4) Prohibition of bypass.

i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

A. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

B. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

C. The permittee submitted notices as required under paragraph (m)(3) of this section.

ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (m)(4)(i) of this section.

(n) Upset

(1) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(2) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (n)(3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(3) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i) An upset occurred and that the permittee can identify the cause(s) of the upset;

ii) The permitted facility was at the time being properly operated; and

iii) The permittee submitted notice of the upset as required in paragraph (1)(6)(ii)(B) of this section (24-hour notice).

iv) The permittee complied with any remedial measures required under paragraph (d) of this section.

(4) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

40 CFR 122.42 Additional conditions applicable to specified categories of NPDES permits (applicable to State NPDES programs, see Section 123.25).

The following conditions, in addition to those set forth in Section 122.41, apply to all NPDES permits within the categories specified below:

(a) Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under Section 122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

(1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i) One hundred micrograms per liter (100 ug/l);

ii) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Sec. 122.21(g)(7); or

iv) The level established by the Director in accordance with Section 122.44(f).

(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i) Five hundred micrograms per liter (500 ug/l);

ii) One milligram per liter (1 mg/l) for antimony;

iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Section 122.21(g)(7).

iv) The level established by the Director in accordance with Sec. 122.44(f).

(b) Publicly owned treatment works. All POTWs must provide adequate notice to the Director of the following:

(1) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and

(2) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under Sections 122.26(d)(2)(iv) and (d)(2)(v) of this part;

(4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;

i) effluent introduced into the POTW, and

ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(c) Municipal separate storm sewer systems. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under Sec. 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions;

(2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with Section 122.26(d)(2)(iii) of this part; and

(3) Annual expenditures and budget for year following each annual report;

(4) A summary describing the number and nature of enforcement actions, inspections, and public education programs;

(5) Identification of water quality improvements or degradation;

(d) Storm water discharges. The initial permits for discharges composed entirely of storm water issued pursuant to Section 122.26(e)(7) of this part shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

40 CFR 122.43 Establishing permit conditions (applicable to State programs, see Section 123.25).

40 CFR 122.43(a) through (c).

40 CFR 122.44 Establishing limitations, standards, and other permit conditions (applicable to State programs, see Section 123.25).

40 CFR 122.44(a) through (s).

40 CFR 122.45 Calculating NPDES permit conditions (applicable to State programs, see Section 123.25).

40 CFR 122.45(a) through (h).

40 CFR 122.46 Duration of permits (applicable to State programs, see Section 123.25).

40 CFR 122.46(a) through (e).

40 CFR 122.47 Schedules of compliance (applicable to State programs. see Section 123.25).

40 CFR 122.47(a) and (b).

40 CFR 122.48 Requirements for recording and reporting of monitoring results. (applicable to State programs, see Section 123.25).

40 CFR 122.48(a) through (c).

40 CFR 122.49 Considerations under Federal law.

40 CFR 122.49(a) through (g).

40 CFR 122.50 Disposal into wells, into publicly owned treatment works (applicable to State programs, see Section 123.25).

40 CFR 122.50(a) through (c).

40 CFR 122.61 Transfer of permits (applicable to State programs, see Section 123.25).

40 CFR 122.61(a) through (b).

40 CFR 122.62 Modification or revocation and reissuance of permits (applicable to State programs, see Section 123.25).

40 CFR 122.62(a) through (b).

40 CFR 122.63 Minor modifications of permits.

40 CFR 122.63(a) through (g).

40 CFR 122.64 Termination of permits (applicable to State programs, see Section 123.25).

40 CFR 122.64(a) through (b)

Note: The sections of 40 CFR Standard Provisions listed above that are not quoted verbatim can be obtained through the following website: www.access.gpo.gov.

ATTACHMENT NO. 3

ADDITIONAL STANDARD PROVISIONS

1. *Review and revision of permit*: Upon application by any affected person, or on its own motion, the SDRWQCB may review and revise this permit. All requirements shall be reviewed periodically. [CWC 13263(e)]

2. *Termination or modification of permit*: This permit may be terminated or modified for causes, including, but not limited to, all of the following:

   (a) Violation of any condition contained in this permit.

   (b) Obtaining this permit by misrepresentation, or failure to disclose fully all relevant facts.

   (c) A change in any condition that requires either a temporary of permanent reduction or elimination of the permitted discharge. [CWC 13381]

3. *Material change*: Not less than 180 days prior to any material change in the character, location, volume, or amount of waste discharge, the Discharger shall submit a technical report describing such changes. Such changes include but are not limited to the following:

   (a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

   (b) Significant change in disposal method, e.g., change from land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.

   (c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.

   (d) Increase in flow beyond that specified in the waste discharge requirements.

   (e) Increase in area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CWC 13376, 13264, 23 CCR 2210]

   (f) Any substantial change in the amount or characteristics of pollutants used, handled, stored, or generated.

   (g) Any new discharge of pollutants or new potential pollutant source.

(h) Other circumstances which could result in a material change in the character, amount, or location of discharges. [CWC 13264, 23 CCR 2210]

4. *Transfers*: When this permit is transferred to a new owner or operator, such requirements as may be necessary under the California Water Code may be incorporated into this permit.

5. *Conditions not stayed*: The filing of a request by the Discharger for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

6. *Availability*: A copy of this Order shall be kept at a readily accessible location and shall be available to on-site personnel at all times.

7. *Duty to minimize or correct adverse impacts*: The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

8. *Responsibilities, liabilities, legal action, penalties*: The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the Clean Water Act. [CWC 13385, 13387]

   Nothing in this Order shall be construed to protect the Discharger from its liabilities under federal, state, or local laws.

   Except as provided for in 40CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Discharger from civil or criminal penalties for noncompliance.

   Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties to which the Discharger is or may be subject to under Section 311 of the CWA.

   Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

9. *Noncompliance*: Any noncompliance with this permit constitutes violation of the California Water Code and is grounds for denial of an application for permit modification. (Also, see 40CFR 122.41 (a))

10. *Discharge is a privilege*: No discharge of waste into waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights. {CWC 13263(g))

11. *Permittee*: For the purposes of this permit, the term "permittee" used in parts of 40 CFR incorporated into this permit by reference and/or applicable to this permit shall have the same meaning as the term "Discharger" used elsewhere in this permit.

12. *Director*: For the purposes of this permit, the term "Director" used in parts of 40 CFR incorporated into this permit by reference and/or applicable to this permit shall have the same meaning as the term "SDRWQCB" used elsewhere in this permit, except that in 40CFR 122.41(h) & (I), "Director" shall mean "SDRWQCB, SWRCB, and USEPA."

13. *Effective date*: This Order shall become effective ten days after the date of its adoption provided the USEPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

14. *Continuation of expired permit*: After this permit expires, the terms and conditions of this permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits are complied with. [40CFR 122.6, 23 CCR 2235.4]

15. *Applications*: Any application submitted by the Discharger for reissuance or modification of this permit shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the California Water Code and the California Code of Regulations.

16. *Confidentiality*: Except as provided for in 40CFR 122.7, no information or documents submitter in accordance with or in application for this permit will be considered confidential, and all such information and documents shall be available for review by the public at the offices of the SDRWQCB.

17. *Severability*: The provisions of this order are severable, and if any provision of this order, or the application of any provisions of this order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this order shall not be affected thereby.

18. *Discharge Monitoring Quality Assurance (DMQA) Program*: The Discharger shall conduct appropriate analyses on any sample provided by EPA as part of the DMQA program. The results of such analyses shall be submitted to EPA's DMQA manager. [SWRCB/USEPA 106 MOA]

19. *Pollution, Contamination, Nuisance*: The handling, transport, treatment, or disposal of waste or the discharge of waste to waters of the state in a manner which causes or threatens to cause a condition of pollution, contamination, or nuisance, as those terms are defined in CWC 13050, is prohibited.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

MONITORING AND REPORTING PROGRAM NO. R9-2003-0179
NPDES PERMIT NO. CA0107492

FOR THE
PADRE DAM MUNICIPAL WATER DISTRICT
PADRE DAM WATER RECYCLING FACILITY
DISCHARGE TO
SYCAMORE CREEK AND THE SAN DIEGO RIVER
SAN DIEGO COUNTY

A. PURPOSE

This monitoring program is intended to:

1. Document the short-term and long-term effects of the discharge on water quality and the beneficial uses of the receiving waters.

2. Assess treatment plant performance and compliance with the NPDES permit terms and conditions.

B. MONITORING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this MRP and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance.

2. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

3. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 5 percent from true discharge rates throughout the range of expected discharge volumes. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. The discharger shall maintain calibration records including a written statement signed by a registered professional engineer certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.

4. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.

5. Monitoring must be conducted according to United States Environmental Protection Agency test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified in this MRP or approved by the Executive Officer.

6. The discharger shall have, and implement, an acceptable written Quality Assurance /Quality Control (QA/QC) plan for field and laboratory analyses. An annual report shall be submitted by March 1 of each year which summarizes the QA/QC activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent of the samples or at least once during the permit term, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by USEPA or the Executive Officer, the discharger will participate in the NPDES discharge monitoring report QA/QC performance study. The discharger should have a success rate equal or greater than 80 percent.

7. The discharger shall implement this monitoring and reporting program on January 1, 2004. The Monitoring and Reporting Program of Order No. 98-60 shall remain in effect between the adoption date of Order No. 2003-0179 and the implementation of this MRP.

8. The discharger shall submit all information necessary to determine compliance with effluent limitations (e.g. if the permit contains a daily maximum and monthly average for a particular constituent, the discharger shall report the daily maximum and monthly average for that constituent, as defined in the reporting requirements below, and in the same units as the permit limit). For any effluent limitation, compliance shall be determined using sufficient sampling and analysis and appropriate statistical methods to evaluate multiple samples.

9. The discharger shall report all instances of noncompliance at the time monitoring reports arc submitted.

10. Monitoring results must be reported in a format approved by the Executive Officer.

11. All reports submitted in response to this MRP shall comply with the signatory requirements of 40 CFR 122.22.

12. If the discharger monitors any pollutants more frequently than required by this MRP, using test procedures approved under 40 CFR, Part 136, or as specified in this MRP, the results of this monitoring shall be included in the calculation and reporting of the

data submitted in the discharger's monitoring report. The increased frequency of monitoring shall also be reported.

13. The discharger shall report with each sample result the reported Minimum Level (ML) and the laboratory's current Method Detection Limit (MDL). For each numeric effluent limitation, the discharger shall select one or more Minimum Levels (and their associated analytical methods) from Appendix 4 of the State Water Resources Control Board *Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Implementation Policy). The "reported" Minimum Level is the Minimum Level (and its associated analytical method) chosen by the discharger for reporting and compliance determination from Appendix 4 of the Implementation Policy. The discharger must select from all Minimum Levels from Appendix 4 of the Implementation Policy that are below the effluent limitation. If the effluent limitation is lower than all the Minimum Levels in Appendix 4 of the Implementation Policy, then the discharger must select the lowest Minimum Level.

14. Minimum Levels in Appendix 4 of the Implementation Policy represent the lowest quantifiable concentration in a sample based on the proper application of method-specific analytical procedures and the absence of matrix interferences. Minimum Levels also represent the lowest standard concentration in the calibration curve for a specific analytical technique after the application of appropriate method-specific factors. Common analytical practices may require different treatment of the sample relative to the calibration standard. Some examples of these practices are given in Section 2.4.2 of the Implementation Policy. Other factors may be applied to the Minimum Level depending on the specific sample preparation steps employed. For example, the treatment typically applied when there are matrix effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied during the computation of the reporting limit. Application of such factors will alter the reported Minimum Level.

15. The discharger shall instruct its laboratories to establish calibration standards so that the Minimum Level (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve. In accordance with the Implementation Policy, the discharger's laboratory may employ a calibration standard lower than the Minimum Level in Appendix 4 of the Implementation Policy.

16. In addition to paper copies, the discharger shall submit all monitoring results in an electronic (tab delimited or spreadsheet) format (preferably on compact disc) with the annual report submittals.

17. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this MRP,

and records of all data used to complete the application for this MRP. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Executive Officer or the United States Environmental Protection Agency. Records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements;
b. The individuals who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The laboratory and individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of all such analyses.

18. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

19. A composite sample is defined as a combination of at least 100 milliliters collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

20. The 12-month average shall be the moving arithmetic mean of all samples collected over any 12-month period.

21. The annual average shall be the mean of all samples collected in one calendar year.

22. The 30-day average shall be the moving arithmetic mean of daily concentrations over any 30-day period.

23. The monthly average shall be the mean of all samples collected in a calendar month.

24. The 7-day average shall be the moving arithmetic mean of daily concentrations over any 7-day period.

25. The weekly average shall be the mean of all samples collected in a calendar week, Sunday through Saturday.

26. The daily maximum shall be the maximum result of all samples collected in a calendar day.

27. The instantaneous maximum, or “maximum at any time” effluent limitation shall apply to each sample independently (i.e. all results shall be compared to the limit).

28. If only one sample is collected during the time period associated with the effluent limitations (e.g., 30-day average or 6-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

29. When determining compliance based on a single sample, with a single effluent limitation which applies to a group of chemicals concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the MDL for that parameter.

30. The mass emission rate (MER), in pounds per day, shall be obtained from the following calculation for any calendar day:

    mass emission rate (lb/day) = 8.34 x Q x C

    in which Q and C are the flow rate in MGD and the constituent concentration in mg/l, respectively, and 8.34 is a conversion factor with units of [lb/MGD] / [mg/l]. If a composite sample is taken, then C is the concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited.

31. Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in Order R9-2003-0179 or this monitoring and reporting program.

32. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 MPN (most probable number). The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for coliforms (total and fecal) shall be those presented in the most recent edition of *Standard Methods for the Examination of Water and Wastewater* or any improved method determined by the Executive Officer to be appropriate. Detection methods used for escherichia coli shall be those presented in USEPA publication USEPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure* or any improved method determined by the Executive Officer to be appropriate.

33. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

    Geometric Mean = $(C_1 \times C_2 \times ... \times C_n)^{1/n}$

    where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 ml) found on each day of sampling.

34. Compliance with the daily average operating filter effluent turbidity limit of 2 Nephelometric Turbidity Units (NTU) shall be determined using the levels of recorded turbidity levels at a minimum of four-hour intervals over a 24-hour period.

Compliance with the turbidity standard of not exceeding 5 NTU more than 5 percent of the time over a 24-hour period shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2-hours over a 24-hour period. Should the continuous turbidity meter and/or recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted until the turbidity meter and/or recorder is fixed.

35. By March 1 of each year, the discharger shall submit an annual report to the Regional Board and USEPA Region 9 that contains tabular and graphical summaries of the influent, effluent, and receiving water monitoring data obtained during the previous year. The discharger shall discuss the compliance record and corrective actions taken or which may be needed to bring the discharge into full compliance with the requirements of Order No. R9-2003-0179 and this monitoring and reporting program. A discussion and interpretation of the receiving water data collected during the previous year shall also be provided.

36. Monitoring results shall be reported at intervals and in a manner specified in Order No. R9-2003-0179 and/or this monitoring and reporting program. Monitoring reports shall be submitted to the Regional Board and to USEPA Region 9, as appropriate, according to the following schedule:

Monitoring Frequency	Reporting Period	Report Due
Continuous, Daily, Weekly, Monthly	All	First day of the second month after the month of sampling (e.g., January sampling: due March 1)
Quarterly	January – March April – June July – September October – December	May 1 August 1 November 1 February 1
Semiannually	January – June July – December	September 1 March 1
Annually	January – December	March 1

37. Revisions to this MRP may be made by the Regional Board at any time during the term of Order No. 2003-0179, and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

C. CHRONIC WHOLE EFFLUENT TOXICITY

The discharger shall conduct quarterly freshwater chronic toxicity tests on 24-hour composite effluent samples taken at the discharge from Lake No. 1 and grab samples taken from receiving water sample locations specified in this MRP. Whenever possible, a split of each effluent toxicity sample collected will be used for the chemical and physical analyses required in this MRP.

1. Test Species and Methods

   a. The discharger shall conduct short-term tests with the cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test); the fathead minnow, *Pimephales promelas* (larval survival and growth test); and the green alga, *Selanastrum capricornutum* (growth test) for the first three suites of tests. After this screening period, monitoring shall be conducted using the most sensitive species.

   b. Every year, the discharger shall re-screen once with the three species listed above and continue to monitor with the most sensitive species. Re-screening shall be conducted at a different time of year from the previous year's re-screening.

   c. The presence of chronic toxicity shall be estimated as specified in EPA's methods (USEPA 600/4-91-002).

2. Toxicity Limits

   a. Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity requirements are specified in the Prohibitions of Order No. 2003-0179.

   b. Results shall be reported in TUc, where TUc = 100/NOEC. The no observed effect concentration (NOEC) is the highest concentration of toxicant to which organisms are exposed in a chronic test that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant to which the values for the observed responses are <u>not</u> statistically significantly different from the controls).

3. Quality Assurance

   a. A series of at least five dilutions and a control will be tested. The series shall include the following concentrations: 12.5, 25, 50, 75, and 100 percent effluent.

   b. If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

   c. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the manual, then the discharger must re-sample and re-test within 14 days or as soon as possible.

d. The reference toxicant and effluent tests must meet the upper and lower bounds on test sensitivity as determined by calculating the percent minimum significant difference (PMSD) for each test result. The test sensitivity bound is specified for each test method (see variability document EPA/833-R-00-003, Table 3-6). There are five possible outcomes based on the PMSD result:

1. **Unqualified Pass**–The test's PMSD is within bounds and there is no significant difference between the means for the control and the 100 percent treatment. The regulatory authority would conclude that there *is no toxicity at 100 percent effluent.*

2. **Unqualified Fail**–The test's PMSD is larger than the lower bound (but not greater than the upper bound) in Table 3-6 and there is a significant difference between the means for the control and the 100 percent treatment. The regulatory authority would conclude that there *is toxicity at 100 percent effluent*.

3. **Lacks Test Sensitivity**–The test's PMSD exceeds the upper bound in Table 3-6 and there is no significant difference between the means for the control and the 100 percent treatment. The test is considered invalid. An effluent sample must be collected and another toxicity test must be conducted. The discharger must re-sample and retest within fourteen (14) days or as soon as possible.

4. **Lacks Test Sensitivity**–The test's PMSD exceeds the upper bound in Table 3-6 and there is a significant difference between the means for the control and the 100 percent treatment. The test is considered valid. The regulatory authority will conclude that there *is toxicity at 100 percent effluent*.

5. **Very Small but Significant Difference**–The relative difference (see Section 6.4.2) between the means for the control and the 100 percent treatment is smaller than the lower bound in Table 3-6 and this difference is statistically significant. The test is acceptable. The NOEC is determined as described in Sections 6.4.2 and 6.4.3.

e. Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

4. Preparing the Initial Investigation of the TRE Workplan

The discharger shall submit to the Regional Board a copy of the discharger's Toxicity Reduction Evaluation (TRE) workplan (1-2 pages) within 90 days of the effective date of this permit. This plan shall describe the steps the discharger intends to follow if toxicity is detected, and should include, at least the following items:

a. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

b. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices.

c. If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

5. Accelerated Testing

a. If a routine effluent sample exhibits chronic toxicity, then at least one additional test is necessary.

b. If chronic toxicity is identified in the additional test, then the discharger shall conduct six more tests, approximately every two weeks, over a twelve-week period. Testing shall commence within two weeks of receipt of the sample results of the additional test.

c. If none of the six tests indicate toxicity, then the discharger may return to the normal testing frequency.

6. Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE)

a. If chronic toxicity is detected in any of the six additional tests, then, in accordance with the facility's TRE workplan, the discharger shall initiate a TRE within fifteen (15) days of the exceedance to reduce the cause(s) of toxicity. At a minimum, the discharger shall use EPA manual EPA/833B-99/002 as guidance. The discharger will expeditiously develop a more detailed TRE workplan, which includes:

(1) Further actions to investigate and identify the cause of toxicity
(2) Actions the discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity
(3) A schedule for these actions

b. The discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The discharger shall use the EPA acute and chronic manuals, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (Phase II), and EPA-600/R-92/081 (Phase III) as guidance.

D. INFLUENT MONITORING

Influent monitoring is required to determine the effectiveness of a pretreatment program and assess treatment plant performance. The sampling station shall be located upstream of any in-plant return flows and where a representative sample of the influent to the treatment plant can be obtained. The date and time of sampling shall be reported with the analytical values determined.

The following shall constitute the influent monitoring program:

Influent Monitoring

Parameter	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
flowrate[1]	mgd	recorder/totalizer	continuous	monthly
pH	pH units	grab	2 times/day	monthly
BOD (5-day, 20˚ C)	mg/l	24-hr composite	3 x per calendar week	monthly
total suspended solids	mg/l	24-hr composite	3 x per calendar week	monthly
total nitrogen	mg/l	24-hour composite	monthly	monthly
total phosphorous	mg/l	24-hour composite	monthly	monthly

Notes:
1. Both the daily average and daily maximum shall be reported for influent flowrate.

E. EFFLUENT MONITORING

Effluent monitoring is required to determine compliance with the permit conditions and to identify operational problems and improve plant's performance. Effluent monitoring also provides information on wastewater characteristics and flows for use in interpreting water quality and biological data.

Sample stations are Station A - a point after dechlorination and Station B - the discharge point where water from Lake 1 overflows to Sycamore Creek. The date and time of sampling shall be reported with the analytical values determined.

If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the discharger shall monitor and record data for all of the parameters listed in the effluent monitoring schedule, after which the frequencies of analyses listed in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

In conformance with federal regulations (40 CFR 122.45(c)), analyses to determine compliance with the effluent concentration limitations for heavy metals shall be conducted using the total recoverable method. For these constituents, if the discharger

satisfactorily demonstrates to the Executive Officer an acid soluble/total recoverable method relationship, determination of compliance will be based on a comparison of the adjusted total recoverable method results to permit limits.

The following tables shall constitute the effluent monitoring program.

1. Station A – After dechlorination and prior to the discharge to Lake 7

Effluent Monitoring – Station A

Parameter	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
flowrate[1]	mgd	recorder/totalizer	continuous	monthly
specific conductance[1,3]	µmhos/cm	recorder	continuous	monthly
pH[1,3]	pH units	recorder	continuous	monthly
turbidity[2]	NTU	recorder	continuous	monthly
total/fecal coliform[3]	MPN/100ml	grab	daily	monthly
escherichia coli[3]	CFU/100ml	grab	weekly	monthly
BOD (5-day, 20˚ C)	mg/l	24-hr composite	3 x per calendar week	monthly
COD	mg/l	24-hr composite	3 x per calendar week	monthly
total suspended solids	mg/l	24-hr composite	3 x per calendar week	monthly
oil and grease	mg/l	grab	monthly	monthly
total nitrogen	mg/l	24-hour composite	monthly	monthly
total phosphorous	mg/l	24-hour composite	monthly	monthly
total dissolved solids	mg/l	24-hour composite	monthly	monthly
percent sodium	%	24-hr composite	monthly	monthly
color	units	24-hr composite	monthly	monthly
total organic carbon	mg/l	24-hr composite	quarterly	quarterly
total hardness	mg/l	24-hr composite	quarterly	quarterly
chloride	mg/l	24-hr composite	quarterly	quarterly
sulfate	mg/l	24-hr composite	quarterly	quarterly
iron	mg/l	24-hr composite	quarterly	quarterly
manganese	mg/l	24-hr composite	quarterly	quarterly
MBAS	mg/l	24-hr composite	quarterly	quarterly
boron	mg/l	24-hr composite	quarterly	quarterly
fluoride	mg/l	24-hr composite	quarterly	quarterly
Bis (2-Ethylhexyl) Pthalate	µg/l	24-hour composite	semi-annually	semi-annually
priority pollutants[4]	µg/l	24-hour composite/grab[5]	annually	annually
lake 7 fish tissue[6]	ppb	grab	annually	annually

Parameter	Units	Type of Sample	Monitoring Frequency	Reporting Frequency

Notes:
1. Both the daily average and daily maximum shall be reported. Specific conductance and pH shall only be reported as the daily averages, from midnight to midnight.
2. Effluent turbidity analyses should be conducted using a continuous monitoring and recording turbidimeter located prior to the chlorination process. The discharger shall report the average effluent turbidity (24-hours) calculated by averaging recorded turbidity readings taken at a minimum of 4-hour intervals, 95 percentile effluent turbidity (24-hours), and the daily maximum turbidity (daily being defined as the 24-hour period from 12 am to 12 am). Continuous turbidity monitoring must also be provided prior to filtration to ensure adequate process control, and automatic actuate coagulant feed or effluent diversion when the turbidity of the filter influent is greater than 10 NTU.
3. May be measured prior to dechlorination
4. Priority pollutants list as defined in 40 CFR 131.38.
5. Type of sample as specified in 40 CFR 136 Appendix A.
6. Tissue of fish in Lake 7 shall be collected and analyzed according to the latest criteria of Toxic Substances Monitoring Program.

2. Station B – Discharge from Lake 1 into Sycamore Creek

Effluent Monitoring – Station B

Parameter	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
flowrate[1]	mgd	recorder/totalizer	continuous	monthly
chlorine residual[2]	µg/l	grab	daily	monthly
total/fecal coliform	MPN/100ml	grab	weekly	monthly
escherichia coli	CFU/100ml	grab	weekly	monthly
nitrogen (series)[3]	mg/l	24-hour composite	monthly	monthly
phosphorous (series)[4]	mg/l	24-hour composite	monthly	monthly
chronic toxicity	TUc	24-hour composite	quarterly	quarterly

Notes:
1. Both the daily average and daily maximum shall be reported.
2. For chlorine residual, the discharger shall report the daily average, maximum, and minimum values.
3. Nitrogen (series) = total nitrogen, organic nitrogen, nitrate, nitrite, ammonia
4. Phosphorous (series) = total phosphorous and orthophosphate phosphorous

F. RECEIVING WATER MONITORING

1. Core Monitoring

a. To determine compliance with water quality standards, the receiving water quality monitoring program must document conditions in the vicinity of the receiving water discharge points, at reference stations, and at areas beyond the immediate vicinity of the discharge points where discharge impacts might reasonably be expected. Monitoring must reflect conditions during all critical environmental periods.

b. The following shall constitute the core receiving water monitoring stations:

Station Number	Location
1	San Diego River at Carlton Hills Boulevard in Santee (upstream reference station)
2	Forrester Creek 50 feet upstream of the confluence with the San Diego River (upstream reference station)
3	Sycamore Creek at overflow from first pond within Carton Oaks Golf Course
4	Sycamore Creek upstream of the confluence with the San Diego River just prior to stream exit from Carlton Oaks Golf Course
5	San Diego River at Mast Boulevard
6	San Diego River at the pond just downstream of Old Mission Dam
7	San Diego River at San Diego Mission ponds just south of Friars Road bridge

c. Monitoring surveys conducted to meet receiving water monitoring requirements of this MRP shall include, as a minimum, the following information:

(1) A description of climatic and receiving water characteristics at the time of sampling [e.g., observations of wind (direction and speed); weather (cloudy, sunny, or rainy, etc.); observations of water color or discoloration (percent algal cover at surface and bottom); oil and grease; turbidity; odor, and materials of sewage origin in the water or on the riverbank(s); time of sampling; air temperature (^{O}C); water temperature (^{O}C), etc.].

(2) A description of sampling stations, including characteristics unique to each station [e.g., GPS coordinates for station location, photodocumentation, sediment characteristics, rocks, river flow (contiguous or terminated), and estuary mouth conditions (i.e. open or closed due to sand deposition) etc.].

(3) A description of the sample collection and preservation procedures used in the survey and a description of the specific method used for laboratory analysis.

(4) An annual in-depth discussion of the survey results. The discussion shall compare data from the reference station(s) with data from the stations located in the area of the discharge. All tabulations and computations shall be explained.

d. Whenever possible, samples shall be collected on the same day that these constituents are collected at the discharge from Lake 1. Sample methods, preservation, and analyses, when not specified, shall be approved by the Executive Officer. The following shall constitute the receiving water monitoring program:

Core Receiving Water Monitoring

Constituent	Units	Sample Type	Station #	Monitoring Frequency	Reporting Frequency
flowrate	CFS	Cross-sect. velocity/area	1-7	monthly	monthly
specific conductance	µmhos/ cm	grab	1-2, 4-7	monthly	monthly
pH	units	grab	1-2, 4-7	monthly	monthly
nitrogen (series)[1]	mg/l	grab	1-2, 4-7	monthly	monthly
phosphorous (series)[2]	mg/l	grab	1-2, 4-7	monthly	monthly
sediment phosphorous (series)[1]	mg/kg	grab	1-2, 4-7	quarterly	quarterly
total dissolved solids	mg/l	grab	1-2, 4-7	monthly	monthly
tubidity	NTU	grab	1-2, 4-7	monthly	monthly
total/fecal coliform	MPN/100ml	grab	1-2, 4-7	monthly	monthly
escherichia coli	CFU/100ml	grab	1-2, 4-7	monthly	monthly
dissolved oxygen[3]	mg/l	grab	1-2, 4-7	monthly	monthly
temperature	° C	grab	1-2, 4-7	monthly	monthly
chlorophyll-a	mg/m^3	grab	1-2, 4-7	quarterly	quarterly
total organic carbon	mg/l	grab	1, 6	quarterly	quarterly
total hardness	mg/l	grab	1,6	quarterly	quarterly
chloride	mg/l	grab	1,6	quarterly	quarterly
sulfate	mg/l	grab	1,6	quarterly	quarterly
iron	mg/l	grab	1,6	quarterly	quarterly
manganese	mg/l	grab	1,6	quarterly	quarterly
MBAS	mg/l	grab	1,6	quarterly	quarterly
boron	mg/l	grab	1,6	quarterly	quarterly
priority pollutants[4]	µg/l	grab	1-2,6	annually	annually
chronic toxicity	TUc	grab	1,6	quarterly	quarterly
benthic macroinvertebrates[5]	IBI	-	1,6	semiannually	semiannually
pariphyton[6]	IBI	-	1,6	semiannually	semiannually
fish tissue[7]	ppb	grab	7	annually	annually

Notes:

1. Nitrogen (series) = total nitrogen, organic nitrogen, nitrate, nitrite, ammonia
2. Phosphorous (series) = total phosphorous and orthophosphate phosphorous
3. If only one measurement is collected for dissolved oxygen, it shall be determined at the earliest time possible. For each measurement reported, the discharger shall also report the percent saturation (calculated based on temperature).
4. Priority pollutants list as defined in 40 CFR 131.38.
5. Benthic macrtoinvertebrate analysis shall be conducted in May, August, October, and December of each year, using the California Stream Biassessment Procedure (CSBP), professional level point source protocol, and reported using the Index of Biotic Integrity (IBI), as well as each of the individual endpoints. The sampling locations shall be within ½ mile upstream or downstream of the chemical sampling location, at a reach with five riffles or runs. If necessary, reaches with 3-4 riffles will be acceptable. The site shall be selected at the time of sampling, using the sampler's discretion. If a location is dry at the time of sampling the sampler shall attempt to conduct sampling whenever possible for that quarter.
6. Periphyton analysis shall be conducted in May, August, October, and December of each year using the USEPA Rapid Bioassessment Protocols for Use in Wadeable Stream and River – Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition (July 1999) and reported using the Index of Biotic Integrity.
7. Tissue of fish in Lake 7 shall be collected and analyzed according to the latest criteria of Toxic Substances Monitoring Program.

2. Regional Watershed Monitoring

The discharger shall participate and coordinate with state and local agencies and other dischargers in the San Diego Region in development and implementation of a regional watershed monitoring program for the San Diego River Watershed as directed by the Executive Officer. The intent of a regional watershed monitoring program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled resources of the region. During a coordinated watershed sampling effort, the discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the impact of discharges to the watershed.

3. Strategic Process Studies

Special studies are intended to be short-term and designed to address specific research or management issues that are not addressed by the routine core monitoring program. The discharger shall implement special studies as directed by the Executive Officer.

I, John H. Robertus, Executive Officer of the San Diego Regional Water Quality Control Board, do hereby certify the foregoing is a full, true, and correct copy of a Monitoring and Reporting Program adopted by the California Regional Water Quality Control Board, San Diego Region, on November 12, 2003.

JOHN H. ROBERTUS
Executive Officer